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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,533	02/17/2004	Koshi Hatakeyama	1232-5286	2432
27123	7590	12/15/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			SEVER, ANDREW T	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/781,533

Applicant(s)

HATAKEYAMA ET AL.

Examiner

Andrew T. Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 26-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/16/2006 has been entered.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 26 and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Orcutt et al. (US 6,900,918.)

Orcutt teaches in figures 3, 4a, and 4b a scan type display optical system which scans light on a projection surface (fig. 3 part 62), comprising:

A mirror (figure 3 part 36A, figure 4A part 112);

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A first mechanism (figure 4A part 114A) which scans the light in a first direction on the projection surface by rotating the mirror;

A second mechanism (figure 3 part 48) which scans the light in a direction different from the first direction on the projection surface; and

A third mechanism (figure 4B part 108A and 108B) which rotates the first mechanism.

(See column 8 line 34 through at least column 9 line 18 which describes the operating of the first mirror and how the third mechanism rotates the first mechanism to cause the mirror to scan the light.)

*With regards to applicant's claim 28:*

See column 7, which describes how the first and second mechanisms work together to form the two-dimensional image. See above where it is describe that the third mechanism rotates the first mechanism.

*With regards to applicant's claim 29:*

See column 8 line 57, which teaches that the third mechanism works through the first mechanism to set up resonance oscillation of the mirror (112 in figure 4A).

*With regards to applicant's claim 30:*

Clearly the rotational axis of the mirror is the same as that of the first mechanism.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Orcutt et al. as applied to claim 26 above, and further in view of Baba et al. (US 6,626,542 as cited in previous office actions.)

As described in more detail above Orcutt teaches a scan type display optical system, which among other things includes a mirror and a projection surface, however Orcutt does not teach a projection optical system. Baba et al. teach a system in figure 1, which includes first through third reflective optical surfaces (3, 4, and 5 respectively). Baba teaches in column 2 lines 35-52 that reflection type projection optical systems have

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advantages over other prior art projection systems such as refractive systems that are commonly employed, in that they have less distortion and chromatic aberration is decreased. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a reflective projection optical system in the scan type display optical system of Orcutt as taught by Baba, as such a reflective projection optical system would project the light deflected and scanned by the optical scanning device with less distortion and chromatic aberration than other prior art methods resulting in a better projected image.

7. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orcutt et al. as applied to claim 1 above, and further in view of Deter et al. (US 5,822,022 as cited in previous office actions.)

As described in more detail above Orcutt teaches a scan type display optical system, which includes among other things a mirror as well as a light source (56 in figure 3), however Orcutt does not teach details of the optical system such as projection lenses, modulators, light guiding systems and so forth. A system that uses scanning mirrors is taught by Deter in figure 1. Deter teaches that a scan type display optical system includes a light guiding system comprising lenses (24), a modulating device (22 as claimed in applicant's claim 32) among other things. Deter teaches in column 1 lines 55 through column 2 line 28 that by using the optical system of Deter a display system has the advantage of being more versatile and resulting in better pictures across multiple formats and resolutions. Accordingly given the advantages of Deter's optically system, it would

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have been obvious to one of ordinary skill in the art at the time the invention was made to use the optical system including the light guiding optical system and modulation device of Deter in the scan type display optical system of Orcutt as such a system allows for a better displayed image and more versatility.

*Response to Arguments*

8. Applicant's arguments with respect to claims 26-32 have been considered but are moot in view of the new ground(s) of rejection.

The Deter reference has been replaced with the Orcutt reference and is now only being used in claims 31 and 32 to teach the well-known components of a laser based projection system. Since applicant's argument's are directed towards the Deter references and combinations thereof which are no longer being applied, applicant's argument's are moot.

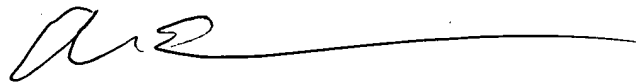
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AS

A handwritten signature in dark ink, appearing to read 'Andrew Sever', with a long horizontal flourish extending to the right.

Andrew Sever